No.



8300179

## THE CONTRES OF AMERICA

TO ALL TO WHOM THESE; PRESENTS; SHALL, COME;

## International Seeds Inc.

Colherens, there has been presented to the

Secretary of Agriculture

AN APPLICATION REQUESTING A CERTIFICATE OF PROTECTION FOR AN ALLEGED NOVEL VARIETY OF SEXUALLY REPRODUCED PLANT, THE NAME AND DESCRIPTION OF WHICH ARE CONTAINED IN THE APPLICATION AND EXHIBITS, A COPY OF WHICH IS HEREUNTO ANNEXED AND MADE A PART HEREOF, AND THE VARIOUS REQUIREMENTS OF LAW IN SUCH CASES MADE AND PROVIDED HAVE BEEN COMPLIED WITH, AND THE TITLE THERETO IS, FROM THE RECORDS OF THE PLANT VARIETY PROTECTION OFFICE, IN THE APPLICANT(S) INDICATED IN THE SAID COPY, AND WHEREAS, UPON DUE EXAMINATION MADE, THE SAID APPLICANT(S) IS (ARE) ADJUDGED TO BE ENTITLED TO A CERTIFICATE OF PLANT VARIETY PROTECTION UNDER THE LAW.

NOW, THEREFORE, THIS CERTIFICATE OF PLANT VARIETY PROTECTION IS TO GRANT UNTO THE SAID APPLICANT(S) AND THE SUCCESSORS, HEIRS OR ASSIGNS OF THE SAID APPLI-CANT(S) FOR THE TERM OF eighteen YEARS FROM THE DATE OF THIS GRANT, SUBJECT TO THE PAYMENT OF THE REQUIRED FEES AND PERIODIC REPLENISHMENT OF VIABLE BASIC SEED OF THE VARIETY IN A PUBLIC REPOSITORY AS PROVIDED BY LAW, THE RIGHT TO EX-PLUDE OTHERS FROM SELLING THE VARIETY, OR OFFERING IT FOR SALE, OR REPRODUCING IT, MPORTING IT, OR EXPORTING IT, OR USING IT IN PRODUCING A HYBRID OR DIFFERENT TY THEREFROM, TO THE EXTENT PROVIDED BY THE PLANT VARIETY PROTECTION ACT 1542, AS AMENDED, 7 U.S.C. 2321 ET SEQ.)

PERENNIAL RYEGRASS

'Gator'

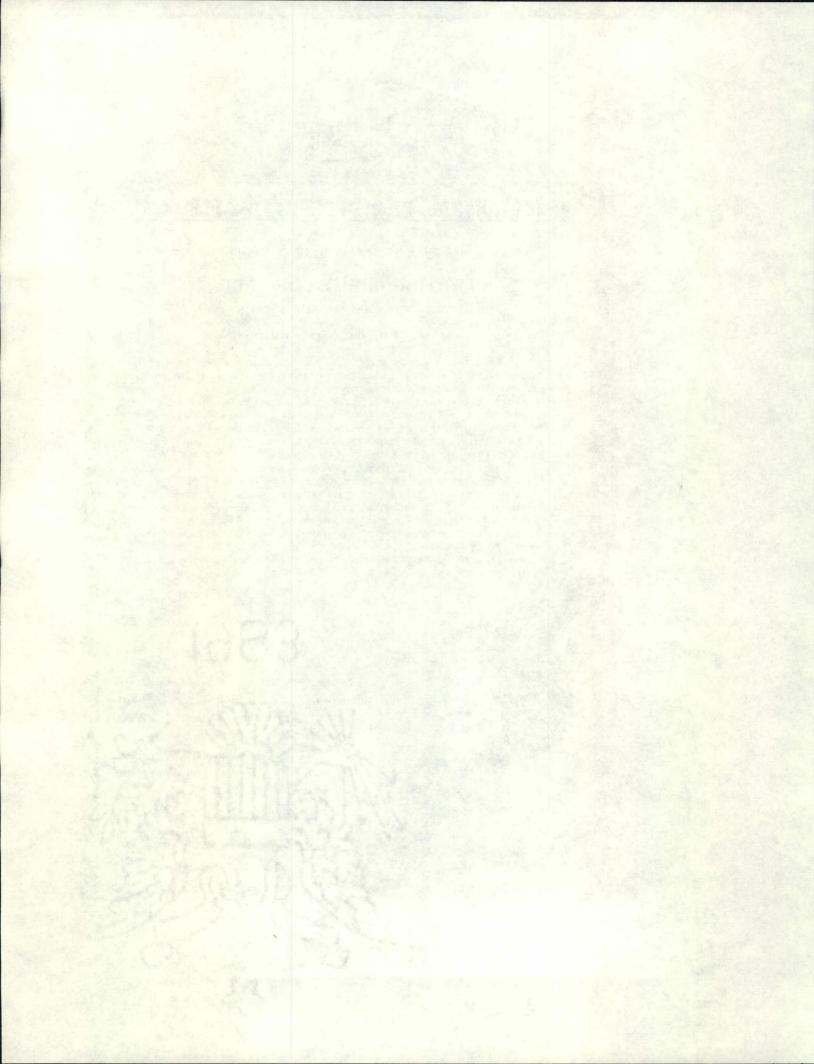
In Testimony Whercot, Thave hereunto set my hand and caused the seal of the Plant Variety Protection Office to be affixed at the City of Washington day of August this 31st

the year of our Lord one thousand nine hundred and eighty-four.

Variety Protection Office Livestock, Meal, Grain & Seed Di

Agricultural Marketing Service

AND AND AND A STREET



AGRICULTURAL N		/ICE	FOR	M APPROVED:	OMB NO. 0581-0008			
APPLICATION FOR PLANT VAR  (Instruction	No certificate for plant variety protection may be issued unless a completed application form has been received (5 U.S.(553).							
1. NAME OF APPLICANT(S)		2. TEMPORARY DESIGNATION	3. V	3. VARIETY NAME				
INTERNATIONAL SEEDS INC.		ISI.812 R39A		Gator				
4. ADDRESS (Street and No. or R.F.D. No., City, St. P.O. Box 168 Halsey, OR 97348	tate, and Zip Code)	5. PHONE (Include area code) (503) 369-2251	PVP	FOR OFFICIAL NUMBER 8300:	Marie Marie			
6. GENUS AND SPECIES NAME	Literal Country Name	gallantically ball on a said	100		175			
Lolium perenne	7. FAMILY NAI	ineae	FILING	9/28/ TIME 2:30				
8. KIND NAME	9.	DATE OF DETERMINATION		AMOUNT FOR	77			
Perennial ryegrass								
10. IF THE APPLICANT NAMED IS NOT A "PERS partnership, association, etc.)  Corporation	ON," GIVE FORM	OF ORGANIZATION (Corporation,	FEES RECEIVED	9/28/ AMOUNT FOR \$ 500.00	CERTIFICATE			
		7/6/84						
11. IF INCORPORATED, GIVE STATE OF INCORPORT Oregon	12.	DATE OF INCO	RPORATION					
a. X Section 52 of the Plant Variety Protection 2  b. X Exhibit B, Novelty Statement  15. DOES THE APPLICANT(S) SPECIFY THAT SE	Act.)	c. Exhibit C, Objective D from Plant Variety Pro	Descrip	otion of the Varie	ety			
ozzo. (See Section 85(a) of the Flant Variety F	rotection Act.)	Yes (If "Yes," answer i	tems 1	6 and 17 below)	OF CERTIFIED X No			
16. DOES THE APPLICANT(S) SPECIFY THAT TH LIMITED AS TO NUMBER OF GENERATIONS	IS VARIETY BE	17. IF "YES" TO ITEM 16, W BEYOND BREEDER SEE	HICH D?	CLASSES OF P	RODUCTION			
X Yes No	ION OF THE WAR	Foundation		egistered	X Certified			
18. DID THE APPLICANT(S) FILE FOR PROTECT	TON OF THE VARI	ETY IN THE U.S. OR OTHER COU	NTRIE	☐ Yes	(If "Yes," give names countries and dates)			
19. HAVE RIGHTS BEEN GRANTED IN THE U.S.	OR OTHER COUNT	TRIES?		A				
				Yes of c	(If "Yes," give names countries and dates)			
20. The applicant(s) declare(s) that a viable sam plenished upon request in accordance with s	ple of basic seeds such regulations a	of this variety will be furnished s may be applicable.	with t		and will be re-			
The undersigned applicant(s) is (are) the ow distinct, uniform, and stable as required in S Variety Protection Act.	ner(s) of this sexu	ally reproduced novel plant vari	ety, a provi	nd believe(s) the sions of Section	hat the variety is n 42 of the Plant			
Applicant(s) is (are) informed that false repr	resentation herein	can jeopardize protection and re	esult i	n penalties.				
SIGNATURE OF APPLICANT	Lepin		DA	9-6-83				
SIGNATURE OF APPLICANT Gerard W.	Pepin		DA	ATE				
					1			

#### INSTRUCTIONS

General: Send an original copy of the application and exhibits, at least 2,500 viable seeds, and \$500 fee (\$250 filing fee and \$250 examination fee) to U.S. Department of Agriculture, Agricultural Marketing Service, Livestock, Meat, Grain and Seed Division, Plant Variety Protection Office, National Agricultural Library Building, Beltsville, Maryland 20705. (See section 180.175 of the Regulations and Rules of Practice.) Retain one copy for your files. All items on the face of the form are self-explanatory unless noted below.

#### Item

- Give the date the applicant determined that he had a new variety based on (1) the definition in section 41(a) of the Act and (2) the date a decision was made to increase the seed.
- Give: (1) the genealogy, including public and commercial varieties, lines, or clones used, and the breeding method; (2) the details of subsequent stages of selection and multiplication; (3) the type and frequency of variants during reproduction and multiplication and state how these variants may be identified and (4) evidence of uniformity and stability.
- Give a summary statement of the variety's novelty. Clearly state how this novel variety may be distinguished from all other varieties in the same crop. If the new variety most closely resembles one or a group of related varieties: (1) identify these varieties and state all differences objectively; (2) attach statistical data for characters expressed numerically and demonstrate that these differences are significant; and (3) submit, if helpful, seed and plant specimens or photographs of seed and plant comparisons clearly indicating novelty.
- 14c Fill in the Exhibit C, Objective Description form, for all characteristics for which you have adequate data.
- Describe any additional characteristics that are not described, or whose description cannot be accurately conveyed in Exhibit C. Use comparative varieties as is necessary to reveal more accurately the description of characteristics that are difficult to describe, such as plant habit, plant color, disease resistance, etc.
- If "Yes" is specified (seed of this variety be sold by variety name only as a class of certified seed) the applicant may NOT reverse his affirmative decision after the variety has either been sold and so labeled, his decision published, or the certificate has been issued. However, if the applicant specified "No," he may change his choice. (See section 180.16 of the Regulations and Rules of Practice.)
- See section 42 of the Plant Variety Protection Act and section 180.7 of the Regulations and Rules of Practice.

#### EXHIBIT A

#### ORIGIN AND BREEDING HISTORY OF "GATOR"

Gator is an advanced generation synthetic cultivar selected from the progenies of 56 clones. Eighteen plants selected from Loretta perennial ryegrass were used as female parents of the 56 clones used in development of Gator. Selection was based on seedling resistance to crown rust and attractive appearance in spaced-plant nurseries. The pollen parents of the clones used in the development of Gator were selected from breeding composites designated H74-412, H75-969, H75-1076, and AW. Plants collected from old turfs in Maryland, New Jersey, New York, and Pennsylvania were the original source of the germplasm used in the development of these breeding composites. Two cycles of recurrent restricted phenotypic selection for disease resistance, stress tolerance, attractive appearance, mowing quality, and turf performance were used in the development of the four breeding composites. The selection of the 56 parental clones of Gator involved the screening of over 30,000 seedlings for crown rust resistance, the evaluation of over 10,000 clones in spaced-plant nurseries, and the study of 648 single plant progenies in seeded turf trials. Progenies of the 56 parental clones of Gator were subjected to interplant competition, disease, and environmental stress in closely mowed turf plots. A total of 6,100 tillers were selected from these turf plots and transferred to an isolated, spaced-plant nursery at Adelphia, New Jersey. Selection within this nursery was based on freedom from disease, a bright dark green color, soft leaves, attractive appearance, and uniform maturity. Nearly 50 percent of the plants failed to meet

A TOTAL STREET

these standards and were removed prior to anthesis. Bulked seed harvested from the Adelphia nursery was subsequently used to establish a spaced-plant nursery near Halsey, OR for production of breeder seed. This nursery was also carefully rogued to improve uniformity, disease resistance, appearance, and seed yield potential. The first certified seed was produced in western Oregon in 1983.

No off-type plants or variants have been observed in the reproduction and multiplication of Gator perennial ryegrass.

Gator perennial ryegrass is a uniform and stable variety. Breeder seed and foundation seed generations have produced turf of equal quality and acceptable uniformity. Foundation and certified seed fields are similar in appearance. They are as uniform as would be expected in this species, being similar in uniformity to the standard varieties of turf-type perennial ryegrasses.

#### EXHIBIT B

#### NOVELTY STATEMENT OF "GATOR" PERENNIAL RYEGRASS

"'Gator'' can be distinguished from all other cultivars of perennial ryegrass by the combination of spaced-plants and turf characteristics described in tables 1 to 8.

Gator most closely resembles Yorktown II. It differs significantly from Yorktown II in the following characteristics:

- 1. Gator is 3 days earlier in date of heading than Yorktown II. (table 1).
- 2. Gator has much better resistance to crown rust than Yorktown II (table 3).
- 3. Gator has a significantly smaller seed size than Yorktown II, averaging 151 mg. per thousand seeds compared to 171 mg/1000 seeds for Yorktown II (table 2).

## AVERAGE HEADING DATE OF RYEGRASS CULTIVARS AT TANGENT, OREGON IN 1983

Cultivar	Heading Date
Gator	May 19
Yorktown 2	May 22
Pennfine	May 10
Manhattan	May 25
Linn	May 8
Derby	May 12
Citation	May 11
Fiesta	May 12

LSD.05 = 2 days

## SEED SIZE OF VARIOUS RYEGRASS CULTIVARS

Cultivar	Seed Size Mg/1000 seeds
Gator	1510
Yorktown 2	1710
E1ka	1290
Derby	1550
LSD.05	130

RV Telloff 9

TEN THE A STATE OF THE A

Table 3. Reaction of perennial ryegrass varieties to crown rust at New Brunswick, New Jersey during 1979 and 1980.

	Rust rating 9 = 1east	12.00	Rust rating 9 = least
Variety	rust	Variety	rust
E1ka	9.0 a*	Barry	4.5 g-m
Gator	8.5 a-b	Diplomat	4.4 g-n
Loretta	8.5 a-b	Regal	4.4 h-n
Prelude	7.7 a-c	Lp 20	4.2 i-o
Sprinter	7.7 a-c	Clipper	4.2 i-o
Premier	7.4 a-d	Caravelle	3.9 j-o
Fiesta	7.3 a-d	Derby	3.9 j-o
Delray Delray	7.2 a-e	Eton	3.7 j-o
Pennant	6.9 b-f	Yorktown	3.6 k-o
Palmer	6.9 b-f	Omega	3.5 1-0
Birdie	6.5 c-g	Barclay	3.2 1-0
Dasher	6.5 c-g	NK-200	3.0 m-o
Linn	6.1 d-h	Manhattan	2.9 n-o
Acclaim	5.9 d-i	Barcelona	2.5 o
Blazer	5.6 e-j		
Belle	5.6 e-j		
NK-100	5.0 f-k		
Pennfine	4.9 f-1		
Citation	4.9 f-1		
Yorktown II	4.5 g-m		

<sup>\*</sup>Ratings followed by the same letter are not significantly different from each other according to Duncan's multiple range test. p = 0.05

### NOT FOR PUBLICATION

Table 4. Seed yield and stem rust of perennial ryegrasses grown near Hubbard, Oregon during 1982.

Variety	Seed yield lbs/Acre	Stem rust rating July 1982 9 = least rust
Manhattan II	1552	9.0
Gator	1452	4.0
Prelude	1411	3.0
Premier	1319	3.5
Citation	1303	2.0
Palmer	1236	2.5
Pennant	1211	3.5
Pennfine	1120	2.0
Yorktown II	1074	3.0
Manhattan	962	3.5
LSD 0.05		1.1

NOT FOR PUBLICATION

## Characteristics of 28 perennial ryegrass varieties for turf use in New Jersey

Variety	Turf Performance in New Jersey	Color	Leaf	Density	Vertical leaf elonga- tion rate	Tolerance of close mowing	Heat tolerance	Cold tolerance	Resistance to winter brown blight	Resistance to Rhizoctonia brown patch	Resistance to crown rust	Resistance to sod webworms	Resistance to billbugs	Average	
Palmer Pennant Manhattan II Prelude Gator	7.8 6.2 7.6 7.5	7 7 7 7	7 6 7 6 7	8 6 8 8 8	8 6 7 7 7	8 7 8 8	8 8 8 7 7	6 6 6 6	7 6 7 6 7	8 7 7 7	7 7 6 8 8	5 8 4 5 2	- 8 - 4 -	7.0 6.8 6.7 6.7	
Premier All*Star Blazer Delray HR-1	7.3 7.3 7.2 5.5 7.4	7 7 7 6 6	7 7 7 6 7	8 8 8 6 7	7 7 7 7 7	8 7 8 7 7	7 7 7 7 7	6 6 6 8 6	6 6 7 3 6	7 7 7 7 7	7 6 6 7 6	5 7 2 2 4	4 - 4 - 4	6.6 6.6 6.4 6.4	
Dasher Yorktown II Belle Fiesta Barry	6.5 7.0 6.9 6.7 6.4	6 7 7 7 7	6 8 6 7 7	7 8 7 7	7 7 7 7 7	8 8 8 8 8	8 6 7 7 7	6 7 6 6 6	6 7 7 6 6	7 7 7 7 7	7 5 6 7 5	2 2 2 2 2 2	5 2 3 3 5	6.3 6.2 6.2 6.2 6.2	
Elka Diplomat Regal Omega Loretta	6.6 6.3 6.3 6.0 6.1	4 7 7 7 4	8 7 6 6 8	8 7 6 7 8	8 7 6 7	8 8 7 7 8	7 7 8 7 6	5 6 6 7 5	5 7 4 7 6	5 7 7 7 5	9 4 4 4 8	2 2 3 2 2	3 8 2 2	6.1 6.0 6.0 5.9 5.8	8300179
Citation Derby Pennfine Manhattan Caravelle	5.9 5.9 5.7 5.5 5.2	8 7 6 6 9	7 6 6 6 6	6 6 6 6	7 6 6 6 7	7 7 7 7 7	8 7 7 6 3	5 5 7 3	3 4 3 7 5	7 7 7 5 4	5 4 5 3 4	2 2 2 2 2 2	2 2 5 4 2	5.6 5.6 5.4 5.4	

and the special section of the secti 8300TA8

Variety	Turf Performance in New Jersey	Color	Leaf texture	Density	Vertical leaf elonga- tion rate	Tolerance of close mowing	Heat tolerance	Cold	Resistance to winter brown blight		Resistance to crown rust	Resistance to sod webworms	Resistance to billbugs	Average	
Rex Cropper Linn	4.8 2.5 2.3	6 4 4	5 3 3	5 3 3	5 3 3	6 3 3	5 3 3	5 4 3	5 5 4	4 2 2	5 8 6	2 2 2	3 - 3	4.7 3.6 3.2	

Rating scale = 0 to 9 with highest numbers denoting best performance scores, darkest color, finest texture, lowest rate of vertical growth, best tolerance of close mowing, greatest heat tolerance, best cold tolerance, and best resistance to winter brown blight, Rhizoctonia brown patch, crown rust, sod webworms, and billbugs.

FORM GR-470-36 (9-76)

# U.S. DEPARTMENT OF AGRICULTURE AGRICULTURAL MARKETING SERVICE GRAIN DIVISION HYATTSVILLE, MARYLAND 20782 OBJECTIVE DESCRIPTION OF CULTIVARS RYEGRASS

(Lolium spp.)

COMP.	
NAME OF APPLICANT(S)	VARIETY NAME OR TEMPORARY DESIGNATION
INTERNATIONAL SEEDS INC.	Gator
ADDRESS (Sweet and No., or R.F.D. No., City, State, and ZIP Code)	FOR OFFICIAL USE ONLY
P.O. Box 168 Halsey, OR 97348	8300179
lace the appropriate number that describes the varietal character of this variety in the boxes to umber if either 99 or less or 9 or less. Descriptions of characters should represent those that at should be for SPACED PLANTS. Give additional description for all characteristics that certinent comparative trial and evaluation data.  1. SPECIES:  1 = L. MULTIFLORUM (annual or Italian: includes Westerwoldicum) 2 = L. PER	annot be adequately described in the form below. Append all
	R (Specify)
2. PLOIDY:	
	R (Specify)
2 DURATION:	
7 1 = ANNUAL OR BIENNIAL 2 = SHORT LIVED PERENNIAL (3-4 years)	3 = PERENNIAL (more than 4 years)
STANDARD CULTIVARS	
1 = GULF 2 = WIMMERA 62 3 = LINN	4 = PELO B = PENNFINE
5 = NORLEA 6 = ABERYSTWYTH S-23 7 = MANH 4. MATURITY (50% HEADED) Use standards from above for comparison:	ATTAN OFFICIAL ATTAINS
9 = VERY LATE  O 9 DAYS LATER THAN  MATURE PLANT HEIGHT (Use standard cultivars from above):	THAN
CM. TALLER THAN STANDARD CULTIVAR	
6. PERCENT WINTER DAMAGE (estimated as percent of the area appearing dead).	Use standard cultivars from above for comparison:
PERCENT DAMAGE OF APPLICATION CULTIVAR	
PERCENT DAMAGE OF STANDARD CULTIVAR	
7. TURF DENSITY Use standard cultivars from above:	
TILLERS PER 100 SQ. CM.	
LESS TILLERS PER 100 SQ. CM. THAN STANDARD CO	ULTIVAR
MORE TILLERS PER 100 SQ. CM. THAN STANDARD CO	ULTIVAR
8. FLAG LEAF (at full growth) Use standard cultivars from above:	
	WIDTH (at widest point)  1 = DEFLEXED
0 0 5 CM. SHORTER THAN 7 STANDARD C	BOOT STAGE: 5 = HORIZONTAL 7 = SEMI-ERECT 9 = ERECT
0 0 6 CM. LONGER THAN 8 STANDARD C	
MM. NARROWER THAN STANDARD C	ULTIVAR
MM. WIDER THAN STANDARD C	ULTIVAR 11

FORM GH-470-36 (9-76)	STAND	ARD CULTIVARS	
1 - GULF	2 = WIMMERA 62	3 = LINN 7 = MANHATTAN	4 = PELO 8 = PENNFINE
5 - NORLEA	6 = ABERYSTWYTH S-23	7 - MANTATTAN	
9. LEAVES:	LEAVES ROLLED IN YOUNG SHOOTS		
	LEAVES SEMI-ROLLED (folded with rolled	edges)	
3 -	LEAVES FOLDED IN YOUNG SHOOTS		
0 3 3 % PLANT	S WITH ANTHOCYANIN IN LOWER LEAF	SHEATH 3 FOLIAGE COLO	1 = YELLOW GREEN R: 2 = MEDIUM GREEN 3 = BLUE GREEN
10. SPIKE:			
1 8 4 MM. SPIN	KE LENGTH (tip to internode below lowest fl	oret)	
0 7 MM. SHORTE	R THAN	7 USE STANDARD CUL	TIVARS FROM ABOVE
0 2 MM. LONGE	R THAN	[8])	
MG	. PER TEN SPIKES (trimmed to internode be	low lowest floret)	
MG	LIGHTER PER TEN SPIKES THAN		TIVARS SROW AROVE
MG. HEA	VIER PER TEN SPIKES THAN	. Se STANDARD COL	TIVARS FROM ABOVE
FLORETS PE	R SPIKELET		
PERCENTAGE OF PL	ANTS WITH:		
RACHIS:	% ѕмоотн	% ROUGH	
SPIKE COLOR:	% GREEN	% PURPLE	
LEMMA:	% AWNED	MM. AWN LEN	GТН
MM. GLUME	LENGTH	1 = SPIKELET LENGTH 2 = SPIKELET LENGTH GLUMES	NEARLY EQUAL TO OUTER GLUMES MUCH LONGER THAN OUTER
11. COLEOPTILE:			
% PLANT	S WITH ANTHOCYANIN IN COLEOPTILE		
12. ANTHER COLOR:			
% PLANT	TS WITH WHITE ANTHERS	% PLANTS WIT	H YELLOW ANTHERS
% PLAN	TS WITH PURPLE ANTHERS		
13. ROOT AND PLANT	CHARACTERS:		
% PLAN	TS WITH PROSTRATE GROWTH HABIT	0 0 0 % PLANTS WIT	TH FLUROESCENT ROOTS
% PLAN	TS WITH UPRIGHT GROWTH HABIT		
14. SEED:			
1 5 1 MG. PEF	3 1,000 SEED	MM. TOTAL LENGTH OF 10 SEEDS	MM. TOTAL WIDTH

COMMENTS:

PAGE 3 OF 3

CROWN RUST (PLEAF SPOT (Hell	minthosporium) M yphula) R	OLLAR SPOT (Sclerotinia)  TILDEW  THER (Specify)  THER (Specify)			
NSECT (0 = NC	T TESTED, 2 = HIGHLY SUSCEPTIB GHLY RESISTANT):	E, 4 - MODERATELY SUSCEPTIBLE, 6 - MODERATELY RESISTANT,			
	d Webworm				
COMPARISON IS	ANCE VALUE IN LEFT COLUMN AND MADE ( 1 = LESS THAN, 2 = SAME EATER HEIGHT.):	VARIETY CODE NUMBER IN RIGHT COLUMN FOR VARIETY WITH WHICH AS, 3 = MORE ERECT, MORE RESISTANT, DENSER, MORE PERSISTENT,			
ESEMBLANCE	CHARACTER	SIMILAR VARIETY			
2	PLANT HABIT (erectness)	7 1 = GULF			
2	TILLERING	7 2 = WIMMERA 62			
1	WINTER HARDINESS	7 3 = LINN			
3	HIGH TEMP. STRESS RESISTANCE	7 4 = PELO			
2	TURF PERSISTENCE	7 5 = NORLEA			
3	PLANT COLOR	7 6 = ABERYSTWYTH S-23			
	VERTICAL SEEDLING GROWTH F	ATE 7 = MANHATTAN			
3	CROWN DENSITY	7 8 = PENNFINE			
3	MOWER SHREDDING RESISTANC	7			

13